



Underwriters Laboratories Inc.®

FAX (NO. 406) 290-3220
http://www.ul.com

140666



a century of
public safety
est. 1894

MR I HAGINO, PATENT SEC
TAKAMISAWA ELECTRIC CO LTD
3-5 HIGASHI GOTANDA 2-CHOME
SHINAGAWA-KU
TOKYO 141-0022 JAPAN

Date: 02/09/1999
File No: E56140
Volume: 10
Project No: 99SC41042
PR No: 99001201
Type: R
EO Number:
Subscriber: 694584002

Subject: Procedure And/Or Report Material

The following material resulting from the investigation under the above numbers is enclosed.

Issue				
<u>Date</u>	<u>Vol</u>	<u>Sec</u>	<u>Pages</u>	<u>Revised Date</u>
7/21/92	10	1	Revised Description Page(s) 4	1/26/99

Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

Please review this material and report any inaccuracies to Robert Gill (EXT. 32987), referring to the above Project and/or PR Numbers.

c:Santa Clara File

A not-for-profit organization
dedicated to public safety and
committed to quality service

D E S C R I P T I O NPRODUCT COVERED:

Component - Magnetic Motor Controller, Models LZ, may be followed by B, followed by -1.5 through -100 or 1.5 through 100, may be followed by H, L, V, may be followed by M, may be followed by S, may be followed by E, G, N, Q, or 5R, may be followed by - (hyphen), may be followed by three digits 501 through 999 inclusive, may be followed by C or K, may be followed by U.

GENERAL CHARACTER AND USE:

These devices have SPDT or SPST (normally open) contacts with DC operating coils. These devices are for use in vending machines, air conditioners and similar devices.

* Relays which are constructed of a Class 130(B) insulation materials, see ILL. 17, are identified by the addition of the suffix letter "B" immediately following the Type "LZ" designation.

MAXIMUM RATINGS:

Type	Rated	Application	Endurance Cycles
LZ	3 A, 120 V ac	Resistive	6,000
	2.5 A, 240 V ac	Resistive	6,000
	3 A, 30 V dc	DC	6,000
	1/10 HP, 3 FLA, 120 V ac	Pilot Duty Code D150	6,000
	1/10 HP, 1.5 FLA, 240 V ac	Pilot Duty Code D150	6,000
LZ()H	5 A, 120 V ac	Resistive	6,000
	4 A, 240 V ac	Resistive	6,000
	5 A, 240 V ac	Resistive	30,000
	5 A, 30 V dc	DC	6,000
	1/8 HP, 3.8 FLA, 120 V ac	Pilot Duty Code C150	6,000
	1/8 HP, 1.9 FLA, 240 V ac	Pilot Duty Code C150	6,000
	1.5 FLA, 120 V ac	Pilot Duty	30,000
	0.8 FLA, 240 V ac	Pilot Duty	30,000
	1/16 HP, 2.1 FLA, 120 V ac	ATL Motor Starting	100,000
	1/16 HP, 1.05 FLA, 240 V ac	ATL Motor Starting	100,000
LZ()H(S)Q	6 A, 120 V ac	Resistive	100,000
	6 A, 24 V dc	DC	100,000
LZ()H(S)Q	Same as LZ()H plus 5a, 120 V ac	Resistive	100,000
	1/10 HP, 3 FLA, 120 V ac	ATL Motor Starting	100,000
LZ()L	1 A, 120 V ac	Resistive	6,000
	0.7 A, 240 V dc	Resistive	6,000
	1 A, 30 V dc	DC	6,000
	1/20 HP, 120 V ac	ATL Motor Starting	1,000
	1/20 HP, 240 V ac	ATL Motor Starting	1,000
LZ()V	10 A, 120 V ac	Resistive	6,000
	7 A, 240 V ac	Resistive	6,000
	10 A, 24 V dc	DC	6,000
	1/4 HP, 120 V ac	ATL Motor Starting	1,000
	1/4 HP, 240 V ac	ATL Motor Starting	1,000
LZ()VM	10 A, 120 V ac	Resistive	6,000
	7 A, 240 V ac	Resistive	6,000
	10 A, 24 V dc	DC	6,000
	1/4 HP, 120 V ac	ATL Motor Starting	1,000
	1/4 HP, 240 V ac	ATL Motor Starting	1,000
	1/4 HP, 2.5 FLA, 120 V ac	Pilot Duty	30,000
	1/4 HP, 1.25 FLA, 240 V ac	Pilot Duty	30,000
1/10 HP, 3 FLA, 120 V ac	ATL Motor Starting	100,000	

MAXIMUM RATINGS: (cont.)

<u>Type</u>	<u>Ratings</u>	<u>Application</u>	<u>Endurance Cycles</u>
*LZ()VMSR	Same as LZ()Vm plus		
	10 A, 120 V ac	Resistive	100,000
	4 A, 240 V ac	Resistive	100,000
	1/4 HP, 5.8 FLA, 120 V ac	ATL Motor Starting	100,000
	1/4 HP, 2.9 FLA, 240 V ac	ATL Motor Starting	100,000

Operating Coils - 1.5 through 100 V dc; see nomenclature.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - For use in products where the acceptability of the combination is determined by Underwriters Laboratories, Inc.

The component has been judged on the basis of the required spacings in the Standard for Industrial Control Equipment (UL 508), Paragraph 48.1 which covers the end use product for which the component was designed.

VP/AP:jg

scprc

Conditions of Acceptability

1. These devices should be used within Recognized ratings, as specified below.
2. These devices should be mounted in the intended manner in enclosures having adequate strength and thickness and with acceptable spacings being provided.
3. The Test Record should be reviewed to determine if tests need to be repeated, giving particular attention to Temperature Tests.
4. The terminals are to be factory wired, only and the suitability of the connection, including spacings between factory connectors, shall be determined.

NOMENCLATURE:

$\frac{LZ}{I} - \frac{B}{II} \quad \frac{5}{III} \quad \frac{V}{IV} - \frac{M}{V} \quad \frac{S}{VI} \quad \frac{E}{VII} - \frac{501}{VIII} \quad \frac{C}{IX} \quad \frac{U}{X}$

NOTE: Model number may be split and may appear on two lines.

- I. Relay Type
- II. Temperature Limit of Insulation Materials and Magnet Wire
B - 130°C
None - 105°C
- III. Coil Voltage
1.5 through 100 V dc may be used
*
*
- IV. Relay Type
None - Single Contact (3 A resistive rating) 1/10 HP.
H - Single Contact (5 A resistive rating) 1/8 HP.
L - Single Contact (1 A resistive rating) 1/20 HP.
V - Single Contact (10 A resistive rating) 1/4 HP.
- V. Contact Configuration
None - 1 Form C
M - 1 Form A

WM/BG:ea